

Appendix F
NTMA-U Apprenticeship Record 2



THE NTMA-U APPRENTICESHIP RECORD BOOK

The web-based / online learning NTMA-U Apprenticeship Record Book is developed in partnership with the NTMA Member Company, and the National Tooling and Machining Association.

APPRENTICES

This is the official record of your Apprentice Training and Practical Work Experience. It should be used weekly as a guide to help you, and your employers keep track of your progress, and also as proof of your qualifications and experience. You will also find this book helpful when you need to provide documentation of your technical training, and on-the-job competencies to college when applying for Articulated College Credit.

PLEASE NOTE: This NTMA-U Record book is your personal record of your learning experience and training - **TAKE CARE OF IT!**

Apprentices are responsible for:

- 1. Getting the record book endorsed by your employer on a weekly basis.**
- 2. Maintaining up-to-date entries in the employer and training sections.**
- 3. Determining with an employer what additional information needs to be written and also how often.**
- 4. Using the "NTMA-U Training Plan" form with your employer to establish a comprehensive apprenticeship program that complies with the DOL- Office of Apprenticeship 607.5 hours of Related Training and 8,000 hours of related trade shop time.**

Please note: Instructors and employers are not responsible for your documentation - they are only responsible for signing off the areas you have completed.

EMPLOYERS

The Apprenticeship Record Book will assist the apprentice in collecting official documentation of their apprenticeship. It is extremely important that you complete the in shop training experience endorsement. This book will be an important tool for your apprentice to record his/her level of machine trades training completed.

PRINTING AND ASSEMBLING AN APPRENTICESHIP RECORD BOOK

Personalizing "Your" Record Book

- This book will be uniquely yours. Your collection of all the information pertaining to your Apprenticeship Training and Practical Work Experience. As no two apprenticeships are identical, no two record books will be identical.
- Creating and maintaining this book will require effort on your part. Your record book will reflect the amount of care and attention you pay to it.
- We recommend you consider purchasing a 1" wide waterproof binder (8.5" x 11") to set up your basic record book. This size will allow you to collect and store any important documents that pertain to your apprenticeship
- Depending on the conditions your record book will be exposed to you may want to consider using a waterproof paper to print out the forms we've created that will become the basis of your record book.



PERSONAL INFORMATION FORM

APPRENTICE INFORMATION

NAME:

DATE OF Enrollment into NTMA-U Training:

NAME of Shop Supervisor:

EMPLOYER INFORMATION for REGISTERED APPRENTICESHIP AGREEMENTS:

EMPLOYER INFORMATION

Apprentice YEAR: 1 2 3 4 (circle)
Employer: _____
Full Address (Street / City / State / Postal) _____
Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

Apprentice YEAR: 1 2 3 4 (circle)
Employer: _____
Full Address (Street / City / State / Postal) _____
Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

Apprentice YEAR: 1 2 3 4 (circle)
Employer: _____
Full Address (Street / City / State / Postal) _____
Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

EMPLOYER INFORMATION
Apprentice YEAR: 1 2 3 4 (circle)
Employer: _____
Full Address (Street / City / State / Postal) _____
Employees Start Date with the Company: Dates of Employment: To: _____

From:

TRAINING				
Week	Topic	Coursework	Assignments	
1	Introductions and Drill Press	Math: Geometry (3 videos) Drill Press Video	ToolingU: Intro to GD&T 200 Hole Inspection 240 Hardness Testing 260	Discussion Board: Introductions – 25pts
2	Engine Lathe	Math: Unit 18, page 151 (watch video)	ToolingU: Interpreting Blueprints 230 Measuring System Analysis 300	
3	Machining Operations on the Lathe	Math: Unit 18, pg. 153 (video) pg. 154 (video) Blueprint: TP114, TP115	ToolingU: Metal Removal Processes 110 What is Cutting? 120 Cutting Fluids 210	COMPLETE QUIZ - 224pts
4	Manual Lathe Threading	Math: Unit 18 (watch videos for page 155 problems) Blueprint: TP116, TP117	ToolingU: Threading on the Engine Lathe 235 Engine Lathe Operations 225	
5	Taper Turning	Math: Unit 18 (Page 156 video) Blueprint: TP118, TP119 Video: Using the Thread Gage	ToolingU: Trig: Pythagorean Theory 205 Speed and Feed Selections 300	COMPLETE LATHE QUIZ – 100 pts
6	Vertical Milling Machine	Math: Unit 18, page 157 Geometry 142-144 (video) Blueprint: TP119, TP120	ToolingU: Holmaking on the Mill 230 Machines for Cutting Metal 130 Basics of the Manual Mill 110	COMPLETE MATH TEST – 100pts
7	Tools and Workholding	Math: Unit 19 (video over page 161) Blueprint: TP121, TP122	ToolingU: Speed and Feed Selection 300 Optimizing Insert Life 305	
8	Midterm and Vertical Milling Operations	Blueprint: TP123	ToolingU: Manual Mill Operations 220 Chucks, Collets, and Vises 110	MID-TERM: MATH QUIZ - 100pts WORKHOLDIN G QUIZ – 100pts
9	Indexing and Tooling	Math: Intro To Trig Blueprint: TP124, TP125	ToolingU: Cutting Tool Materials 220 Tool Geometry 240 Milling Geometry 245 Toolholders for Turning 260	COMPLETE MILLING QUIZ - 100pts
10	Grinding	Math: Sine, Cosine,	ToolingU:	COMPLETE

	Tangent Units 20, 21 Pages 167-172 Blueprint: TP126, TP127	What is Grinding 110 Grinding Processes 120	DRILL PRESS QUIZ-100pts
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11	Surface Grinding Operations	Math: Calculator for Trig Page 180 Blueprint: TP128, TP129	ToolingU:	COMPLETE GRINDING TEST-100pts
			Dressing and Truing 230 Surface Grinder Operations 240	
12	CNC	Math: Page 181 (videos) Blueprint: TP130, TP131	ToolingU:	
			History and Definition of CNC 100 Intro to EDM 100 Basics of the CNC Machining Center 130	
13	CNC Turning	Math: Pages 181-182 (videos) Blueprint: TP132, TP133	ToolingU:	
			Basics of the CNC Turning Center 120 Cylindrical Grinder Operations 250	
14	CNC Turning-Programming	Blueprint: TP134, TP136	ToolingU:	
			Part Program 150 Creating a Turning Program 280	
15	CNC Turning, Set-up, and Operation	Blueprint: TP137, TP138	ToolingU:	COMPLETE CNC QUIZ -100pts
			Basics of the CNC Swiss-Type Lathe 135 CNC Specs for the Lathe 225 Turning Calculations 285	
16	Wrap-up and Testing		FINAL EXAM	

TOPIC	POSSIBLE POINTS	STUDENT POINTS
Discussion Board-Introduction	25	
Quiz	224	
Lathe Quiz	100	
Math Test	100	
Math Quiz	100	
Workholding Quiz	100	
Milling Quiz	100	
Drill Press Quiz	100	
Grinding Test	100	
CNC Quiz	100	

TOOLINGU COURSES	Grade	Hours
Intro to GD&T 200		4 hrs
Hole Inspection 240		4 hrs
Hardness Testing 260		4 hrs
Interpreting Blueprints 230		4 hrs
Measuring System Analysis 300		4 hrs
Metal Removal Processes 110		4 hrs
What is Cutting? 120		4 hrs
Cutting Fluids 210		4 hrs
Speed and Feed Selections 300		4 hrs
Threading on the Engine Lathe 235		4 hrs
Engine Lathe Operations 225		4 hrs
Trig: Pythagorean Theory 205		4 hrs
Holemaking on the Mill 230		4 hrs
Machines for Cutting Metal 130		4 hrs
Basics of the Manual Mill 110		4 hrs
Speed and Feed Selection 300		4 hrs
Optimizing Insert Life 305		4 hrs
Chucks, Collets, and Vises 110		4 hrs
Manual Mill Operations 220		4 hrs
Cutting Tool Materials 220		4 hrs
Tool Geometry 240		4 hrs
Milling Geometry 245		4 hrs
Toolholders for Turning 260		4 hrs
What is Grinding 110		4 hrs
Grinding Processes 120		4 hrs
Dressing and Truing 230		4 hrs
Surface Grinder Operations 240		4 hrs
Cylindrical Grinder operations 250		4 hrs
History and Definition of CNC 100		4 hrs
Intro to EDM 100		4 hrs



Basics of the CNC Turning Center 120		4 hrs
Part Program 150		4 hrs
Creating a Turning Program 280		4 hrs
Basics of the CNC Swiss-Type Lathe 135		4 hrs
CNC Specs for the Lathe 225		4 hrs
Turning Calculations 285		4 hrs
Totals		148 hrs

ON-THE-JOB TRAINING FORM

(TO BE COMPLETED & SIGNED BY EMPLOYER'S REPRESENTATIVE)

DATE		Courses	TASKS	ENDORSEMENT
FROM: (Y/M/D)	TO: (Y/M/D)		DESCRIPTION OF TYPES OF WORK PERFORMED	1. NAME 2. TITLE 3. SIGNATURE
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)
		2)		2)
				3)
		1)		1)

	2)	2)
		3)



TRAINING PLAN WORKSHEET

APPRENTICESHIP TRAINING PLAN YEAR: **1 2 3 4** (circle year of apprenticeship)

Training Period		TRAINING COMPETENCIES	METHOD OF EVALUATION	DATE COMPLETED	ASSIGNED JOURNEYWORKER	ENDORSEMENT
From (Y/M/D)	To (Y/M/D)					
		Safely Operate a Drill Press				
		Safely Operate an Engine Lathe				
		Safely Operate a Manual Mill				
		Understands basic CNC Lathe Programs				
		Understands basic CNC Mill Programs				
		Can perform basic Shop Trig Calculations				
		Can correctly Calculate correct Speeds and Fees				
		Can Safely Operate a Surface Grinder				
		Understands the Basics of Centerless Grinding				

Signatures

Date Signed

Employer:

Journeyworker / Trainer:

Apprentice:
